Rev. 10/93

PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of:

HIROSHI MORI ET AL.

CASE NO.: AD6588 US CNT

SERIAL NO.: 09/852,383

**GROUP ART UNIT: 1711** 

FILED: MAY 10, 2001

**EXAMINER: UMAKANT K** 

**RAJGURU** 

FOR: POLYACETAL RESINS WITH REDUCED

FORMALDEHYDE ODOR

<u>AMENDMENT</u>

Assistant Commissioner for Patents Washington, DC 20231

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Sir:

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In response to the Office Action dated August 29, 2002, the following remarks are provided.

## **REMARKS**

The numbers of the Office Action are referenced herein for ease of review in conjunction with the Office Action.

- 3. The Examiners favorable review of the Applicants persuasive arguments and the withdrawal of the claim rejections in item 3, paper no. 7 is noted.
- 5. Claims 1-17, 28, 29 & 32-36 are rejected under 5 USC § 103(a) as being unpatentable over Gibbs (USP 3,406, 223) in view of Fukumoto et al (USP 5603927) and Shinohara et al (USP 5, 866,671). Applicants disagree.

The examiner states that the Gibbs does not disclose the pKb values, nor the relationship of the boiling point of amino compound and the melting point of polyacetal, nor an organic cyclic of the present invention.

Gibbs discloses the use of amino compounds to restrict hydrolysis stability of polyacetal compositions not to reduce formaldehyde odor as in Applicants Invention. Gibbs requires a superpolyamide additive (col 2, 4-26) that provides a critical function of preventing hydrolysis, which is not required by Applicants invention. In contrast, the amino compounds in Applicants' invention reduce the formalydehyde odor. This is shown by Table 2, page 14 of Applicants' invention. As the TEF values show less stability in the TEF column, the formaldehyde odor is reduced by the additives of Applicants' invention. It is unexpected to those skilled in the art, that the